

Service Date: December 28, 1987

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

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IN THE MATTER Of the Application of)	
MONTANA-DAKOTA UTILITIES COMPANY, a)	UTILITY DIVISION
Division of MDU Resources Group,)	
Inc., for Authority to Establish)	DOCKET NO. 87.9.47
Therm Billing for Natural Gas Ser-)	
vice in the State of Montana.)	ORDER NO. 5316
_____)	

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FINAL ORDER

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APPEARANCES

FOR THE APPLICANT:

John Alke, Attorney at Law, Hughes, Kellner, Sullivan, and
Alke, P.O. Box 1166, Helena, Montana 59624

Cynthia Norland, Attorney, Montana-Dakota Utilities Company,
400 North Fourth Street, Bismarck, North Dakota 58501

FOR THE MONTANA CONSUMER COUNSEL:

Mary Wright, Montana Consumer Counsel, 34 West 6th Avenue,
Helena, Montana 59620, appearing on behalf of the consuming
public of the State of Montana

FOR THE INTERVENORS:

C.W. Leaphart, Jr., Attorney at Law, The Leaphart Law Firm,
101 North Last Chance Gulch, #6, Helena, Montana 59601, ap-
pearing on behalf of Holly Sugar Company

FOR THE COMMISSION:

Robin McHugh, Staff Attorney

BEFORE:

TOM MONAHAN, Presiding
HOWARD L. ELLIS, Commissioner
DANNY OBERG, Commissioner

FINDINGS OF FACT

PART A

GENERAL

1. On September 4, 1987, Montana-Dakota Utilities Company (MDU or Company) filed with the Montana Public Service Commission (Commission) revised rate schedules reflecting the conversion of all commodity natural gas charges to a dekatherm (dkt) basis from the Mcf basis which is currently in effect.

2. The proposed effective date of the revised rate schedules is November 1, 1987. MDU has filed for similar approval in the states of North Dakota, South Dakota, and Wyoming. MDU claims in its filing that therm billing is the predominant standard nationally.

3. MDU states that it has made this filing to achieve the following objectives:

- 1.) Customer pays only for the value of gas received, as measured in British thermal unit (Btu) content, thus providing a more equitable manner of charging a customer for service rendered;
- 2.) Therm billing will provide a better matching of revenues received by MDU from its customers and what MDU pays for gas received at the town border

station to its wholesale gas supplier, Williston Basin Interstate Pipeline Company (WBIP), which presently bills on a therm basis; and

3.) In the future, if MDU finds itself in the position of being able to buy gas from other suppliers, in addition to WBIP, it will be administratively easier and more equitable to make all purchases and sales on the same basis.

4. On September 22, 1987, the Commission issued a Notice of Application and Intervention Deadline, and on September 24, 1987, the Commission issued a corrected Notice of Application and Intervention Deadline.

5. On October 1, 1987, the Montana Consumer Counsel (MCC) sought leave to intervene in this Docket and pledged to assist MDU's interested consumers at the hearing in this Docket .

6. On October 8, 1987, Holly Sugar Corporation petitioned to intervene in this Docket.

7. On October 13, 1987, Action For Eastern Montana petitioned to intervene in this Docket.

8. On October 16, 1987, the Commission issued a Notice of Staff Action granting the requests to intervene in this Docket by Montana Consumer Counsel, Holly Sugar Corp., and Action For Eastern Montana.

9. On October 20, 1987, the Commission issued a Notice of Public Hearing in this Docket. The hearing commenced at 10:00 a.m. on November 12, 1987, at the Fire station, 2305 8th Avenue North, Billings, Montana. Public hearings for the convenience of the public were also held on various dates in the cities of Glasgow, Sidney, Glendive, Miles City, Billings, Hardin.

PART B

MDU's Proposal

10. As stated above, MDU proposes to convert its present form of billing from an Mcf basis to dkt basis. The Company maintains that each customer will be charged an equal price for an equal quantity of heating value received, namely a dekatherm (dkt). One dkt is equal to 1,000,000 British thermal units (Btu). A Btu is defined as the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit. A dkt represents a uniform standard of measurement that takes into consideration both altitude and the heat content of gas delivered to end-use customers so that each pays for only the heating value received on a standard basis. Meter readings in Mcf are used to determine the monthly consumption at local billing pressure. The monthly consumption is converted by an altitude factor to a standard pressure base of 14.73 pounds per square inch absolute (psia). A customer's monthly consumption at 14.73 psia is converted to dkt by applying a Btu factor which represents the heating value of the gas received by the customer. (MDU Exh. 1, Application, pp. 1-2)

11. Each community has a specific billing pressure which is a function of the altitude (atmospheric pressure) of the community and the meter pressure of the gas in that town (either 4 or 5 ounces). Each town or group of towns also has specific Btu factors which are a function of the heating value of the gas received. (MDU Exh. 1, Application, p. 2)

12. Fifteen thermal zones have been established in Montana, and the Btu content can be measured periodically by calorimeters or gas samplers owned by MDU's affiliated supplier, Williston Basin Interstate Pipeline Company (WBIP). The zones were established so there would be no more than a plus or minus 2% fluctuation in heating value between customers within any zone. Changes may be required whenever material changes in the Company's operations cause undue inequities within any zone. MDU proposes to notify the Commission of any zone changes required prior to implementation.

(MDU Exh. 1, Application, p. 3)

13. WBIP halted gas stabilization through nitrogen (inert gas) injection in June and July of 1987, resulting in higher Btu content gas on MDU's system. This has the stated effect of causing an estimated earnings erosion of about \$400,000 annually on a pretax basis in Montana. (MDU Exh. 1, Application, p. 3)

14. The dkt rates proposed in the filing yield the same annual revenue for the test period in Docket No. 85.7.30 as the currently effective Mcf rates, and on this basis the conversion to therm billing is revenue neutral for Montana. (MDU Exh. 1, Application, p. 4)

15. With respect to the impact to customers in any zone where the effect is greater than 12%, MDU suggests a two year phase-in period to mitigate the immediate impact of the conversion. (MDU Exh. 1, Application, p. 5)

16. MDU will not incur any costs for additional facilities to implement therm billing. The only cost to the Company relates to reprogramming the computerized Customer Information System, and such conversion costs are estimated at \$75,000 to \$100,000. In

addition, the Company will incur regulatory costs which are expected to be minimal. (MDU Exh. 1, Application, p. 5)

17. MDU says that a "bills rendered" effective date is critical because of the administrative and customer problems to prorate between dkt and Mcf rates upon implementation of the change. (MDU Exh. 1, Application, p. 5)

18. MDU states that testing of Btu content will occur at different intervals depending on the zone. The accuracy of the calorimeters is within half of 1%, according to MDU, and they are serviced and checked for accuracy monthly. MDU says that it will witness calorimeter calibration at least twice per year. (MDU Exh. 4, pp. 7-8)

PART C

MCC's Position

19. On October 16, 1987, the Commission received MCC's Data Requests in this Docket, and, in the cover letter addressed to Mr. Fox of MDU, Mr. Paine stated:

"As I indicated to you on the phone, the Montana Consumer Counsel has no objections to Therm Billing conversion if done properly. Put another way, we believe Therm Billing provides a more equal basis for assessing costs to gas consumers. We do, however, want to make sure that such things as the logical nature of the zones established and the revenue nature of the case are true to our satisfaction. If and when this is accomplished, then I would envision that our role in matters/hearings involving Therm Billing in your Montana service territory would be one of

explaining our position to the affected consumers."

20. During the hearing, Ms. Wright stated that MCC had no expert witnesses to present in this proceeding (TR, p. 7).

PART D

Commission Analysis and Decisions

21. After much consideration of this proposal, the Commission determines that, for reasons of equity in the billing of MDU's gas customers in Montana and of allowing MDU to have the opportunity to recoup the earnings erosion due to the disparity between WBIP's Btu sales level and MDU's implicitly tariffed Btu level, MDU's application requesting therm billing is approved. This approval is granted with several considerations and conditions in mind, which are discussed below.

22. Effective Date and Terms. MDU asked for the conversion to be effective for bills rendered on and after November 1, 1987. Obviously, that date is long past, but approval on a "bills rendered" basis requires discussion. The Company argues that a "services rendered" basis would cause chaos the first month because of customers having both Mcf and dkt portions of the billing cycle. The Commission sees merit in MDU's concern, but is hesitant to approve a billing method that provides a retroactive effective date before the issuance of this Order.

23. The Commission is aware that MDU's gas supplier, WBIP, has some Purchased Gas Adjustment (PGA) filings before the Federal Energy Regulatory Commission (FERC) awaiting approval. The FERC's

approval of those PGA's will reflect the cost savings due to cessation of nitrogen injection, which MDU agrees is a major reason for the request to convert to therm billing (TR, p. 35). The Commission believes that tying together the approval of WBIP's pending PGA cases (because of the elimination of costs associated with cessation of nitrogen injection) and the approval of MDU's request for conversion to therm billing in this Docket is proper.

These filings reflect the effects of ending the nitrogen injection for both WBIP (no Btu stabilization but decreased related costs of about \$2 million) and MDU (earnings erosion). Immediately upon the FERC's approval of WBIP's PGA filings, MDU will file a gas cost tracking case with the Commission to reflect the new cost of gas from its supplier, and that filing will reflect the elimination of costs associated with the cessation of nitrogen injection.

24. Therefore, the Commission finds that the effective date of this Order is the date of approval, on either an interim or final basis, of MDU's gas tracker filing which reflects the reduced costs related to the cessation of nitrogen injection in the WBIP system. In granting MDU's request for the therm billing conversion on a "bills rendered" basis, the Commission finds that such an arrangement requires therm billing to be effective on a bills rendered basis exactly one month after the Commission approves the gas cost tracker filing mentioned above. For instance, if the Commission approves such an order on January 15, 1988, then therm billing will go into effect for bills rendered on and after February 15, 1988.

25. As a final note on this matter, the Commission reminds MDU of its commitment that in its gas cost tracker filing immediately following the FERC's approval of WBIP's PGA filings, MDU will provide detailed information about the cost reductions (approximately \$700,000 or 5.5 cents per dkt for Montana) associated with the cessation of nitrogen injection (TR, pp. 57-59).

26. Phase-in. MDU proposes a two year phase-in for any increase in a zone exceeding 12% (MDU Exh. 1, Application, p. 5). This would apply only to Zone 21 (Sidney, Savage, and Fairview) and would cause a revenue loss which MDU does not propose to recover (TR, pp. 39-40). The Commission agrees with MDU that the proposed phase-in fairly moderates the effect of the conversion on Zone 21 and approves the phase-in as proposed with the consideration that MDU will never attempt to recover those lost revenues in any subsequent filing.

27. Changing Zone Boundaries. MDU proposes to notify the Commission of changes in zone boundaries (MDU Exh. 1, Application, p. 3). The Commission disagrees with the Company that mere notification of a change in zone boundaries is sufficient, especially given the uncertainties of how long the present or any future zone boundaries will be proper. The Commission, therefore, finds that MDU must apply for Commission approval of any such zone boundary changes. After a few years of therm billing being in place, perhaps the Commission will learn that such a conservative approach is not necessary, but for now the Commission is choosing to act with an abundance of caution. In general, the Commission directs the Company to follow natural boundaries where feasible and avoid center lines of streets.

28. As one other consideration, the Commission finds it proper to require that a current system map showing the location of therm zones be included in MDU's filed tariffs with an explanation of any changes in zone boundaries. The Commission directs MDU to file such a map of Montana thermal zones along with the tariffs that will be filed reflecting the conversion to therm billing.

29. Bill Stuffers and Bill Format. MDU has already sent one bill stuffer prior to implementation (October) and intends to send one with the first bill under therm billing (MDU Exh. 2, pp. 13-14). There will also be a new bill format including new column headings (MDU Exh. 2, pp. 14-15). The Commission finds MDU's proposals on these matters to be adequate and also directs MDU to make available speakers to various civic groups to explain orally to people this conversion to therm billing. If problems develop concerning the dissemination of information or the new bill format, the Commission will work to resolve those matters as they arise.

30. Testing, Monitoring, and Verification. Concerning Btu levels in the various communities and zones, the Commission is gravely concerned about the proper frequency of testing, mode of testing, level of Commission involvement, and independent testing as cross-checking for the accuracy of Company testing. The Company provided much information about how the testing will be done in each zone and the level of Company involvement in monitoring WBIP's testing and its testing facilities. The Commission finds that the Company's proposed level of testing and monitoring is acceptable as a minimum level of oversight on MDU's part. In addition to the Company's testing and monitoring programs, the Commission will contract with an independent testing laboratory to perform two

unannounced Btu content tests per therm zone in Montana during the winter heating period over and above the currently existing Commission testing program. If discrepancies are detected, further testing will be scheduled as deemed necessary by the Commission.

The Commission also finds that MDU must pay for this program of independent testing, the details of which can be worked out as this program is implemented and developed, and that MDU will fully cooperate with this independent testing program in whatever capacity is necessary for the success of the program.

31. Concerning Btu content tests, the Commission finds that MDU must provide to the Commission detailed monthly, quarterly, and annual reports of Btu testing results and the accuracy of WBIP's testing facilities in each zone, including the methods of testing utilized and MDU's efforts concerning monitoring and verification of testing and the results of testing. Among other uses, such information will be critical in determining the integrity of the zone boundaries and any such proposed changes. These reports should be very specific, by community if possible, as to where the testing has occurred.

32. One safeguard concerning WBIP's testing facilities must be addressed. In the event that, for instance, a calorimeter malfunctions, is determined to have erred, or is inoperable, the Commission finds that, for billing purposes, MDU must use the lowest of the previous month's billing factor, the average of the previous six months' billing factors, or the billing factor based on the accurate data available for the month in question. If it is determined that a calorimeter, or other such measuring device, has malfunctioned in the past causing inaccurate billing to the

detriment of MDU's customers, then the lowest result of the above three tests must be applied to determine the resulting credit to the ratepayers in the affected zone(s). MDU is prohibited from attempting to collect any revenues resulting from such billing errors to the detriment of MDU, which is consistent with placing the Company, rather than the ratepayers, at risk for the conversion to term billing.

33. Customer Information System Costs. MDU states that conversion costs for the computerized Customer Information System reprogramming are estimated at \$75,000 to \$100,000 (MDU Exh. 1, Application, p. 5). MDU is not proposing to recover these costs in this filing, and the Commission believes that it would be proper to address these costs in the next general rate filing as they are not yet measurable. MDU is, therefore, required to isolate these costs in its next general filing for the inspection of all parties in that proceeding.

CONCLUSIONS OF LAW

1. The Applicant, Montana-Dakota Utilities Company, furnishes natural gas service to consumers in Montana, and is a "public utility" under the regulatory jurisdiction of the Montana Public Service Commission. S69-3-101, MCA.

2. The Commission properly exercises jurisdiction over the Applicant's rates and operations. S69-3-102, MCA, and Title 69, Chapter 3, Part 3, MCA.

3. The Commission has provided adequate public notice of all proceedings and opportunity to be heard to all interested parties in this Docket. Title 2, Chapter 4, MCA.

4. The rate level and rate structure approved herein are just, reasonable, and not unjustly discriminatory. S69-3-330, MCA.

ORDER

1. The Montana-Dakota Utilities Company shall file rate schedules in accordance with all the provisions of the Findings of Fact in this Order and reflecting the approval of the proposed conversion to therm billing.

2. All motions and objections not ruled upon are denied.

DONE AND DATED this 23rd day of December, 1987, by a 2 -1 vote.

BY ORDER OF THE MONTANA PUBLIC SERVICE COMMISSION

HOWARD L. ELLIS, Commissioner

TOM MONAHAN, Commissioner
Dissenting Attached

DANNY OBERG, Commissioner

ATTEST:

Ann Purcell
Acting Secretary

(SEAL)

NOTE: Any interested party may request that the Commission reconsider this decision. A motion to reconsider must be filed within ten (10) days. See 38.2.4806, ARM.

DISSENT - DOCKET 87.9.47
MDU CONVERSION TO THERM BILLING

The Commission's decision to allow Montana Dakota Utilities (MDU) to convert all billing to a dekatherm (dkt) basis from the present cubic foot (MCF) basis is a mistake. It will force the recovery of the estimated \$400,000 cost of the new billing program to be borne by a handful of Montana residents and it offers a mere gesture of protection from mistakes and overcharges.

At the present time MDU charges customers according to how many cubic feet of gas are used. Because the gas in some areas is hotter, ie., has more British thermal units (BTU) per MCF than in other areas, MDU and its successor company, Williston Basin Pipeline Co., (WBIP) has historically lowered the BTU content of gas in the hot areas by diluting it with nitrogen or air. The overall cost of this dilution program was \$2,000,000 per year, Montana's allocated portion was \$700,000. According to MDU calculations, there will be a loss of \$400,000 a year if the Commission does not allow the conversion to therm billing, because those areas with hot gas will use less and therefore will buy fewer cubic feet. In order to recover this revenue erosion, MDU proposed that its Montana territory be divided into 15 zones, with each zone having a different BTU content in its gas. This is not an arbitrary allocation, there is a real difference in that different areas in Montana have different atmospheric pressures and have varied gas sources. Those areas with hot gas will therefore find their real rates increased, in some cases quite sharply.

According to figures supplied by MDU, Sidney and the surrounding area will experience almost a 20% rate increase, with already high gas bills going up by nearly \$1.00 per mcf. Zone 21, which includes Sidney and Fairview, will pay an additional \$503,000 per year. These two towns have a combined population of about 7,000. Figuring 3 people per household, each ratepayer in these two towns will find their heating

bills increased by \$212.00 a year. Miles City rates will increase by 10%, or 50¢ an MCF. Using the same calculation, Miles City/Terry residents in Zone 16 will pay \$383,000 more a year, or \$109 per ratepayer. Glendive residents, in Zone 20, will go up \$314,000 annually, or \$158.00 per ratepayer. Zone 14 includes Forsyth and Crow Agency, where there will be an increase of \$102,000 per year and \$120.00 per ratepayer. The cost per ratepayer figures will be moderated slightly because commercial and industrial customers will bear part of the increase. However, since local residents pay commercial heating bills through their purchases, the ultimate affect on the ratepayer is the same. The Billings/Laurel area, Zone 13, will see a decrease of \$383,957. However, this will amount to a negligible 44 cents per month.

Repeating the gross figures for the sake of emphasis, this revenue neutral program will increase rates in Sidney by \$503,482 per year, Forsyth \$102,773, Miles City \$383,806 and Glendive \$314,432. On this basis alone, I find the MDU proposal, and its approval by the Montana Public Service Commission, to be totally unacceptable. I simply cannot look coolly and dispassionately on such a disaster!

If the conversion to therm billing must be done because WBIP is ordered by the FERC to buy and sell in dkts and because therm billing is becoming the industry standard, it should be adjusted so there is minimum negative impact upon any Montana ratepayer. Since it was MDU who originally instituted the dilution of gas in hot areas, and thereby profited from that practice, and since it was MDU's successor, WBIP, who has maintained the dilution, at the very least the MDU stockholder should bear half the cost, with the rest being distributed to the entire MDU Montana area.

The other reason for my dissent to this order is the fact that the Commission is requesting that MDU establish a program of only 30 tests for BTU content per year. This will be a little more effective than otherwise, in that tests will be made during the heating season and there will be 2 tests in each heating zone. However, this is comparable to branding every hundredth cow and expecting the herd to still be at home when the rancher is ready to take them to market. It simply isn't an adequate program!

At the present time, if a ratepayer suspects he is not getting the gas he's paying for, he can request a check of his meter. The meter is a sealed unit, and if it proves to be reading fast, an adjustment can be made. There can be no such adjustment when gas is sold by the dekatherm and measured by the cubic foot. It is

absolutely mandatory that a vigorous, comprehensive testing program be undertaken, with spot testing at unannounced intervals and at points of consumption as well as at transmission facilities. For more than 20 years the United States Government resisted signing a treaty to reduce nuclear weapons, because we could not establish an adequate testing program with the Russians. The same principle exists here. Without an adequate testing program, one which is not a burden upon the ratepayer, this application should be denied. The Commission has failed abysmally in its responsibility to protect the Montana consumer by not ordering an adequate testing program.

There is a further factor involved which increases my dissatisfaction with this order. By eliminating postage stamp rates this Commission is taking a backward step in regulation. It is comparable to the backward step taken in the Federal regulation of airlines, telephones, trucking, etc., which destroyed the equalization which kept air travel economical in all parts of the United States, affordable telephone service possible in all parts of the United States, and reasonable freight service possible in all parts of the United States. The same distortion and unfairness Montana experienced because of the Federal destruction of equalization through de-regulation will now be experienced again by small Montana communities. I dissent from this order.

Tom Monahan
Commissioner

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